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Voicing by Adapting and Innovating Employees: An Empirical Study on How Personality and Environment Interact to Affect Voice Behavior

Onne Janssen,^{1,4} Thea de Vries,² and Anton J. Cozijnsen³

This article reports two studies exploring how cognitive style preferences for adaption–innovation affect the likelihood that employees will voice ideas for organizational change toward their supervisors. As hypothesized, Study 1 demonstrates that innovatively compared to adaptively predisposed police officers are less likely to voice conventional ideas and more likely to voice novel ideas for solving work-related problems. Besides a replication of these findings, Study 2 shows how work satisfaction and the quality of the supervisor as voice manager shape the impact of adaption–innovation on employee likelihood to voice. That is, compared to innovators, adaptors are more likely to voice conventional ideas when they are dissatisfied rather than satisfied with work and perceive their supervisors as effective rather than ineffective voice managers. On the other hand, innovators compared to adaptors report greater likelihood to voice novel ideas when they are satisfied rather than dissatisfied with work and perceive their supervisors as effective rather than ineffective voice managers. Theoretical and practical implications of the findings are discussed.

KEY WORDS: adaption–innovation; work satisfaction; supervisor as voice manager; employee voice.

INTRODUCTION

Employee upward voicing of ideas for solving work-related problems can play a crucial role in effective organizational functioning. According to Glauser (1984, p. 614), employee input “can play a key role in personnel

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and operational decisions, as well as alert managers to areas of needed change and adjustment in organizational policy and strategy" (e.g., Katz & Kahn, 1978; Likert, 1961; Miller, 1971; McGregor, 1960). Abundant research has been conducted to identify factors facilitating or impeding the upward flow of information in organizations (for overviews, see: Glauser, 1984; Jablin, 1979). However, little attention has been given to the personality characteristics of employees who voice to their supervisors (Glauser, 1984; Jablin, 1979; Saunders, Sheppard, Knight, & Roth, 1992). This study aims to investigate how cognitive style preferences for adaption-innovation affect employee likelihood to voice ideas for organizational change. First, we review the predominant literature on employee voice. We then address the adaption-innovation theory, and hypothesize a relationship between cognitive style preferences for adaption-innovation and employee voicing of qualitatively different ideas to supervisors. Predictions were tested in two separate studies which are reported and discussed.

ADAPTION-INNOVATION AND EMPLOYEE VOICE

Review of Literature on Employee Voice

The term voice originated in Hirschman's (1970) model of exit, voice, and loyalty. According to this model, employees respond to job dissatisfaction in one of two ways: exit or voice. Employee exit can be described as voluntary separation or turnover from the job, through either leaving the company or seeking a job transfer within the organization (Farrell, 1983). Hirschman (1970) defines the voice option as "any attempt at all to change rather than to escape from an objectionable state of affairs" (1970, p. 30). Both in theory and research, employee voice is mainly related to communication toward superiors (Saunders et al., 1992). It can include submitting and discussing suggestions and ideas about the subordinate's own functioning, about others and their problems, about organizational policies and practices, or about what needs to be done and how it could be done (e.g., Katz & Kahn, 1978, p. 446). Finally, employee loyalty to the organization is hypothesized to moderate the exit/voice decision. That is, more loyal employees are more likely to voice and less likely to exit in response to work-related problems, due to their concern for improving the quality of their organization. In this study, we focus on employee voice, leaving the exit option out of further consideration.

Although research on exit, voice, and loyalty mainly support Hirschman's model (e.g., Farrell, 1983; Rusbult & Farrell, 1983), Whitey and Cooper (1989) note disappointing results with respect to the prediction of employee voice. They offer two explanations for that. First, they argue

that employee voice may be facilitated or impeded by a supervisor's readiness and ability to respond to voice behavior. Inspired by this suggestion, Saunders et al. (1992) demonstrated that employees are more likely to exert voice behaviors when they perceive their supervisors as effective voice managers. Whitey and Cooper's (1989) second explanation concerns conceptual problems. Voice is a broad and complex construct that may have several subcomponents like submitting suggestions to improve things within the framework in which problems occur, or proposing new ways of doing things in the sense of a paradigm shift. Inaccurate and loose operationalizations of the voice construct could have blurred effects of potential determinants in research. Whitey and Cooper (1989) therefore advise researchers to define and operationalize the voice construct in a more precise way than has been done so far. Following their recommendation, in this study we propose to differentiate between employee voice of *conventional* and *novel* ideas for organizational change. As will be discussed in the next section, these qualitatively different ideas stem from different cognitive style preferences.

Adaption-Innovation Theory

Kirton's (1976, 1980) adaption-innovation theory asserts that individuals have different cognitive styles of creativity, problem solving, and decision making. These cognitive style preferences can be described on a bipolar continuum with adaption at one extreme and innovation at the other. *Adaptors* are inclined to think within the confines of the consensually agreed paradigm. When confronted with problems, they prefer to direct their creativity, problem solving, and decision making in accordance with generally accepted guidelines, conventional procedures and the consensus of the group to which they belong. When faced with similar problems, *innovators* are liable to direct their creativity, problem solving, and decision making extra-paradigmatically. That is, they consider the generally agreed guidelines and procedures as part of the issue and invent solutions which challenge and shift the existing paradigm.

As a consequence, employees with different cognitive style preferences for adaption-innovation produce qualitatively different ideas for organizational change. On the one hand, adaptors reinforce the existing paradigm by generating *conventional* ideas that further refine and establish existing rules, methods, and processes. They are cognitively oriented at "doing things better" (Drucker, 1969) or "single loop learning" (Argyris & Schon, 1978). Innovators, on the other hand, challenge the existing paradigm by developing *novel* ideas that unbind the problems from their customary definitions, and involve suggestions for the replacement of established rules, strategies, and policies. In other words, innovators are cognitively oriented

at “doing things differently” (Drucker, 1969) or “double loop learning” (Argyris & Schon, 1978).

To tap the adaptor-innovator personality trait, Kirton (1976) developed the “Kirton Adaption-Innovation Inventory” (KAI). The KAI constitutes of three subscales measuring three personality factors underlying adaption-innovation: originality, efficiency, and conformity. Originality is closely related to Roger’s (1959) creative loner characterized by little respect for conventions, obsessive playing with ideas, and a high need for social acceptance of these ideas. These particular personality components are stated to be prototypical for innovators. Efficiency reflects Weber’s (1948) typically bureaucratic person who is precise, reliable, and disciplined. Conformity mirrors Merton’s (1957) conformist who has proper respect for authority and group rules. The predispositions of efficiency and conformity are asserted to be prototypical for the adaptive personality. According to Kirton (1976), originality, efficiency, and conformity combine additively to create the overall construct of cognitive style preferences for adaption-innovation.

Research provides some empirical evidence that cognitive style preferences for adaption-innovation do indeed characterize employees’ actual creativity and problem-solving behavior. That is, innovators compared to adaptors demonstrate more readiness for change and produce more original ideas for organizational change (e.g., Clapp & De Ciantis, 1989; Haywood & Everett, 1983; Keller & Holland, 1978). However, how this adaptor-innovator personality factor affects employees in their voice behaviors toward supervisors has not yet been examined. Exploring this relationship is important for theoretical as well as practical reasons. Individual differences in cognitive style preferences for adaption-innovation may explain why some employees responding to new stimuli tend to advocate conventional ideas for organizational change and fail to see opportunities outside the existing framework, while others compulsively challenge the currently held paradigm by propagating novel, revolutionary ideas to their supervisor. Moreover, prior research demonstrated that adaptors are attracted to more bureaucratic environments (e.g., production, accounting), whereas innovators prefer organic conditions (e.g., research and development, marketing) (Kirton, 1984). This might explain why some particular work groups perform well in further refining established structures and processes, but fail in responding to new stimuli that defy consensually agreed assumptions and strategies (e.g., Hackman, 1978; Kuipers & Van Amelsvoort, 1992). A possible explanation for this failure is that a work group is dominated by adaptively oriented employees who are cognitively inhibited to produce extra-paradigmatical ideas that fit with altered circumstances.

Employee Voice of Conventional and Novel Ideas

This study aims to examine the impact of the adaptor-innovator personality trait on employee likelihood to voice. In pursuing this aim, we first follow Whitey and Cooper's (1989) suggestion to use precise definitions of voice by differentiating between voice of conventional ideas and voice of novel ideas. Conventional ideas are suggestions for organizational change which further refine the predominant organizational paradigm. Novel ideas, on the other hand, are suggestions for organizational change which challenge or extend consensually accepted patterns.

Next, based on the adaption-innovation theory, we assume that cognitive style preferences for adaption-innovation are related to employee upward voice. That is, stronger adaptively oriented employees are more likely to voice conventional ideas to their supervisors, whereas stronger innovatively-oriented employees are more likely to voice novel ideas.

Third, as behavior is a function of both personality and environment (Forehand & Gilmer, 1964; Lewin, 1936; Murray, 1938), we additionally investigate how the relationship between the adaption-innovation personality trait and employee upward voice is shaped by work satisfaction and the quality of the supervisor as voice manager. Work satisfaction reflects affective responses to specific aspects of an employee's job (Smith, Kendall, & Hulin, 1969). According to Hirschman (1970), the more employees are dissatisfied with their work, the more reason they have to voice ideas to their supervisor in order to change the objectionable state of affairs.

However, as already noted, before employees speak up they will consider the readiness and ability of their supervisor in responding to voice behavior. In this vein, Saunders et al. (1992) proved that employee voice is facilitated or impeded by perceptions of the responsiveness and approachability of their supervisors. Responsiveness represents the extent to which a supervisor is responsive to and deals effectively with voice behaviors, while approachability reflects the degree to which supervisors make the process of voicing more certain and less stressful for employees. Both dimensions were identified as a major cause of the likelihood that employees will voice upward, and were argued to combine additively to create an overall construct of voice management. Saunders et al. (1992) based their supervisor as voice manager concept on Aram and Salipante's (1981) principles of fairness and timeliness, and Leventhal's (1976, 1980) principles of accuracy, representation, and bias-suppression.

Taken together, the present study examines how cognitive style preferences for adaption-innovation affect the likelihood that employees will voice conventional and novel ideas toward their supervisor. We expect that innovative compared to adaptive employees are less likely to voice conventional ideas and more likely to voice novel ideas. These effects will be stronger when employees are dissatisfied rather than satisfied with their

work, and perceive their supervisors as effective rather than ineffective voice managers.

Organizational Context of the Study

The likelihood of employee voice was examined in two field studies among police officers in two districts of the police organization in the Netherlands. The research was part of a stage of problem analysis at the outset of a program for organizational development conducted by an external management consultancy firm. One of the main goals of this development program was to improve the upward communication flow throughout the organization. In the pursuit of this goal, research data were needed to detect conditions that facilitate or impede employees to upward voice their ideas for solving work-related problems. We chose to focus on the hypothetical likelihood that employees will voice in the nearby future rather than on their actual voice behavior in the past for three reasons. First, the development program aimed to advance employees and supervisors in creating effective upward information flows. In line with this purpose, we proposed to detect conditions under which employees will be more likely to voice instead of to focus on factors underpinning why employees voiced so marginally in the past. Second, assessment of actual voice behaviors could be interpreted as performance appraisal giving rise to respondent theories about hidden agendas of the organizational development program. Finally, we wanted to get some indication of the possible content and purport of employee input of ideas in the development program. Therefore, we constructed prewritten items related to qualitatively different ideas for organizational change, and asked employees to report the likelihood that they will voice each of the prewritten ideas toward their supervisors.

STUDY 1

In the first study, we exclusively investigated effects of cognitive style preferences for adaption–innovation on employee likelihood to voice conventional and novel ideas. It was hypothesized that innovative compared to adaptive employees are less likely to voice conventional ideas and more likely to voice novel ideas for organizational change to their supervisors.

Method

Sample and Procedure

Data were gathered from 15 first-line managers and 61 constables in one single district of a regional police organization in the Netherlands. The

mean age of the police officials was 37.5 years ($SD = 7.6$), and their average organization tenure was 16.2 years ($SD = 8.2$).

As mentioned, the research was part of a major program for organizational development conducted by an external management consultancy firm. The questionnaire tapping our study variables was administered and returned by mail. Participation was voluntary for all employees, and anonymity of their responses guaranteed. Data aggregated across work units were used as diagnostic information and fed back to employees and management. The response rate was 43%.

Measures

Adaption-Innovation. Employee cognitive style preferences for adaption-innovation were assessed using a Dutch version (Tierolf, Boers, Van der Molen, & De Graaf, 1990) of Kirton's Adaption-Innovation Inventory (KAI). Subjects were asked to indicate on a 5-point scale how "hard" or "easy" it is to present themselves to others consistently over a long period of time in ways described by 32 statements. The scoring procedure provides that innovators receive high and adaptors low scores. Theoretically, KAI-scores may range from 32 (extreme adaptor) to 160 (extreme innovator) with a mean of 96. The KAI possesses good psychometric properties, including adequate internal and test-retest reliability (Kirton, 1987; Tierolf, Boers, Van der Molen, & De Graaf, 1990). Moreover, there is some evidence that the KAI is unrelated to social desirability (Kirton, 1976; Goldsmith & Matherly, 1986), and valid across different cultures (Holland, 1987). The KAI-scores of the 76 police officers in the present study ranged from 62 to 120, with a mean of 90.39 ($SD = 10.23$), and an internal consistency of .71 (Cronbach alpha).

Employee Likelihood to Voice Conventional and Novel Ideas. To assess the likelihood that subjects will voice conventional and novel ideas, an eight-item scale with prewritten ideas was created. These items were chosen on the basis of unstructured interviews with several police officials from different hierarchical levels focusing on their suggestions for organizational change. Since a police organization functions as a public machine bureaucracy (Mintzberg, 1979), no wonder that many suggestions offered by interviewees refer to bureaucratic characteristics of centralization and formalization. Based on the content of those interviews, we formulated four items reflecting conventional ideas for further refining rules, work methods, and routines within the confines of the existing paradigm, and four items containing novel ideas for radical change and unusual experiments that challenge the established paradigm. On a 7-point Likert scale, ranging from *very unlikely* (1) to *very likely* (7), subjects indicated how likely they are to voice each of the conventional and novel ideas to their supervisors. Data

Table I. Factor Structure of the Employee Likelihood to Voice Ideas Scale^a

Items	Conventional ideas	Novel ideas
To guarantee the established order and routines within the police organization.	.83	-.11
To consolidate the established authority system.	.69	.09
To bind police work to more fixed rules.	.64	.34
To inspect more precisely whether police officers comply with the rules and instructions.	.49	.37
To develop policy aimed at radical changes.	.16	.83
To execute police work in a completely different way than it is customarily done.	.13	.82
To let the police experiment with new, unusual tasks.	.08	.76
To challenge the existing practice of leadership.	.10	.74
Eigenvalues	1.44	3.20
Percentage explained variance	18.10	40.00
Cronbach α	.63	.82

^aAssociated items constitute the subscales of employee likelihood to voice conventional and novel ideas.

from the Employee Likelihood to Voice Ideas Scale were factor analyzed using principal components extraction and a varimax rotation, yielding a two-factor solution (see Table I). The appropriate factors provided subscales for employee likelihood to voice conventional ideas (four items; Cronbach $\alpha = .63$) and novel ideas (four items; $\alpha = .82$), respectively.

Results

To test the hypotheses regarding the relationship between cognitive style preferences for adaption–innovation and employee likelihood of voicing, the subjects were divided into a group of adaptors and a group of innovators using a median split of KAI-scores ($Med = 90$). Multivariate analysis of variance yielded an effect of adaption–innovation on employee likelihood to voice ideas ($F(2,73) = 8.41, p < .001$). Follow-up tests revealed that this effect was significant for both employee likelihood to voice conventional ideas ($F(1,74) = 2.77, p < .05$), and employee likelihood to voice novel ideas, ($F(1,74) = 6.70, p < .01$; see Table II). As hypothesized, innovators compared to adaptors were less likely to voice conventional ideas, but more likely to address novel ideas to their supervisors.

Conclusions

Study 1 aimed to examine cognitive style preferences for adaption–innovation as a personality correlate of employees who intend to voice ideas for organizational change to their supervisors. Results indicated that the cognitive dimension of adaption–innovation affects the qualitative content

Table II. Likelihood to Voice Conventional and Novel Ideas by Adaptors and Innovators

	Adaptors		Innovators		<i>F</i> (1, 74)
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Voice of conventional ideas	3.30	1.21	2.87	1.06	2.77*
Voice of novel ideas	3.09	1.30	3.96	1.61	6.70**

**p* < .05, one-tailed.

***p* < .01, one-tailed.

of employee input. Adaptors reported themselves to be more likely to voice conventional ideas for further refining rules, procedures, and strategies within the confines of the generally agreed paradigm. By contrast, innovators indicated that they are more likely to voice novel ideas for unusual experiments and radical organizational changes. These findings support our assumption that employees are likely to voice qualitatively different ideas as a consequence of cognitive style preferences for adaption–innovation.

A serious caveat of this study concerns the relatively low response rate of 43% which may reflect a self-selection artifact. Though sample characteristics of age and tenure did not substantially differ from the total district population, selection bias cannot be excluded. To overcome this problem, we decided to replicate Study 1.

STUDY 2

The purpose of the second study was to replicate and extend the findings of Study 1. As behavior is a function of both personality and environment (Lewin, 1936; Murray, 1938; Forehand & Gilmer, 1964), we investigated how work satisfaction and the quality of the supervisor as voice manager shape the relationship between cognitive style preferences for adaption–innovation and employee likelihood to upward voice ideas. It was hypothesized that (a) adaptors compared to innovators are more likely to voice conventional ideas, especially when they are dissatisfied rather than satisfied with work and perceive their supervisors as effective rather than ineffective voice managers, and (b) innovators compared to adaptors are more likely to voice novel ideas, especially when they are dissatisfied rather than satisfied with work and perceive their supervisors as effective rather than ineffective voice managers.

Method

Sample and Procedure

Study 2 was conducted among police officials in a second district of the police organization in the Netherlands. As in Study 1, the research was

part of a problem-analysis stage at the outset of a program for organizational development conducted by the same external management consultancy firm. Questionnaires were administered through internal company mail, completed during normal working hours, and returned by regular mail. Participation was voluntary for all employees, and respondents were assured of data confidentiality. Ninety-one police officials returned their questionnaires, resulting in a response rate of 61%. The sample included 14 first-line managers and 77 constables. The average age of the police officials was 36.1 years ($SD = 7.7$) and the average length of their employment on the force was 15.1 years ($SD = 8.2$).

Measures

Adaption-Innovation. To assess cognitive style preferences for adaption-innovation, subjects filled out the Dutch version of Kirton's Adaption-Innovation Inventory (KAI) as described in Study 1. The KAI-scores of the 91 police-officials ranged from 65 to 123, with a mean of 88.75 ($SD = 10.23$). Cronbach α of the summative scale was .81.

Work Satisfaction. The work subscale of the Job Description Index (JDI; Smith et al., 1969) was selected to assess satisfaction with work. This subscale constitutes of 18 adjective-like items to which subjects could respond with *agreement*, *disagreement*, and a *question mark*. The adjectives reflect affective responses to specific aspects of employee's job (Smith et al., 1969). Following Hanisch's (1992) advice, the data were coded in accordance with Smith et al.'s (1969) procedure prescribing that the question mark option should be scored as a more negative than positive response for the overall score. The scale was scored so that a higher overall score reflects higher levels of work satisfaction and lower levels of work dissatisfaction. The reliability coefficient of the work satisfaction scale was .81.

Supervisor as Voice Manager. The Supervisor as Voice Manager Scale (Saunders et al., 1992) was used to tap employee perceptions of the approachability and responsiveness of the supervisor when dealing with upward voice behavior. The scale consists of 14 statements with a 7-point response format, ranging from *strongly disagree* (1) to *strongly agree* (7). Approachability items are related to "uncertainty about how to approach supervisors, the stressfulness of voice, and uncertainty about how supervisors would react to employee voice" (Saunders et al., p. 254). Responsiveness items are related to "fairness, effective decisions, promptness, and willingness to take action" (Saunders et al., p. 252). Cronbach's α on the overall supervisor as voice manager scale was .89.

Employee Likelihood to Voice Conventional and Novel Ideas. To assess employee likelihood to voice conventional and novel ideas, subjects filled

Table III. Factor Structure of the Extended Employee Likelihood to Voice Ideas Scale^a

Items	Conventional ideas	Novel ideas
To further outline the prescriptions who has to do what, where and when.	.84	.02
To regulate daily work through more standard procedures.	.76	.35
To bind police work to more fixed rules.	.67	.29
To consolidate the established authority system.	.56	.38
To implement policy changes in a very gradual and smooth manner.	.53	-.05
To execute policework in a completely different manner than it is customarily done.	.23	.84
To implement totally new work methods.	.29	.80
To let the police experiment with new, unusual tasks.	.01	.79
To challenge the existing practice of leadership.	.05	.76
To radically change the relation between executives and workers.	.10	.75
To develop policy aimed at radical changes.	.28	.73
Remaining Item:		
To tighten discipline among police officers.	.57	.49
Eigenvalues	1.73	4.97
Percentage explained variance	15.70	45.20
Cronbach α	.76	.89

^aAssociated items constitute the subscales of employee likelihood to voice conventional and novel ideas. The remaining item was not included in either subscale because of loading over .40 on both factors.

out an extended version of the Employee Likelihood to Voice Ideas Scale developed in Study 1. Four extra items were added to improve the measurement of the conceptual difference between voice of conventional ideas versus voice of novel ideas. Data were submitted to a factor analysis using principal components extraction and varimax rotation, resulting in the appropriate two-factor solution (see Table III). The two separate dimensions yielded adequate internal-consistency estimates of reliability: .76 for the employee likelihood to voice conventional ideas subscale (five items), and .89 for the employee likelihood to voice novel ideas subscale (six items). One item was dropped because of loadings above .40 on both factors.

Common Method Bias

Because all independent and dependent measures used were gathered through the same questionnaire, common method bias was a potential caveat in this study. To reduce this artifact, we placed the criterion variables after the independent variables in the questionnaire in order to diminish the possible influence of the respondent's implicit effectiveness theories (Podsakoff & Organ, 1986). Additionally, a one-factor test was conducted to get an indication of common method bias. A serious problem of common method variance must be reflected in a single factor emerging from a factor analysis of the self-report measures of cognitive style preferences for adap-

Table IV. Means, Standard Deviations, and Pearson Correlations Among Variables ($N = 91$)

	<i>M</i>	<i>SD</i>	2	3	4	5
1. Voice of conventional ideas	3.16	1.16	.47***	-.21*	.21*	.01
2. Voice of novel ideas	3.38	1.49		.43***	.08	-.25**
3. Adaption-innovation	88.75	11.30			.10	-.17
4. Supervisor as voice manager	4.27	1.28				.07
5. Work satisfaction	3.25	.47				

* $p < .05$, two-tailed.** $p < .01$, two-tailed.*** $p < .001$, two-tailed.

tion-innovation, work satisfaction, supervisor as voice manager, and employee likelihood to voice conventional and novel ideas (cf. Podsakoff & Organ, 1986; Williams, Cote, & Buckley, 1989). A principal components analysis provided 16 factors, with the first factor accounting for only 14% of a total of 74% of explained variance. This finding suggested that common method variance was not a serious problem in this study. Finally, it is hard to imagine that the respondents would artifactually cause interactive effects of adaption-innovation with work satisfaction and supervisor as voice manager on the two criterion variables as hypothesized above.

Results

Descriptive Statistics and Correlations

Table IV presents means, standard deviations, and zero-order correlations among the measures of the constructs. The low correlations among the independent variables of adaption-innovation, work satisfaction, and supervisor as voice manager ruled out problems of multicollinearity. As expected, the context variable of supervisor as voice manager was positively related to employee likelihood to voice conventional ideas ($r = .21, p < .05$), while work satisfaction was negatively related to employee likelihood to voice novel ideas ($r = -.25, p < .01$). Against the expectation, work satisfaction did not relate to employee likelihood to voice conventional ideas ($r = .01$, n.s.), and the supervisor as voice manager did not significantly correlate with employee likelihood to voice novel ideas ($r = .08$, n.s.).

Main Effects of Adaption-Innovation

In order to replicate the results found in Study 1, we applied the same statistical procedures. That is, using the median split of the KAI-scores ($Med = 89$), subjects were divided into a group of adaptors and a group

Table V. Likelihood to Voice Conventional and Novel Ideas by Adaptors and Innovators

	Adaptors		Innovators		<i>F</i> (1, 89)
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Voice of conventional ideas	3.37	1.17	2.95	1.13	3.07*
Voice of novel ideas	2.89	1.15	3.87	1.63	10.82**

* $p < .05$, one-tailed.

** $p < .001$, one-tailed.

of innovators. Multivariate analysis of variance yielded an effect of adaption-innovation on employee likelihood to voice ideas ($F(2,88) = 15.07, p < .001$). As shown in Table V, univariate tests revealed that this effect of adaption-innovation was significant for both dependent variables. Similar to Study 1, we again found that innovators compared to adaptors are less likely to voice conventional ($F(1,89) = 3.07, p < .05$), and more likely to voice novel ideas for organizational change to their supervisors ($F(1,89) = 10.82, p < .001$).

Interactive Effects of Adaption-Innovation

It was further predicted that work satisfaction and supervisor as voice manager moderate the impact of the adaption-innovation personality trait on employee likelihood to voice ideas. Since all predictors are continuous variables, these interactive effects were best analyzed through hierarchical regression (Cleary & Kessler, 1982; Cohen & Cohen, 1983). That is, first the main effects of adaption-innovation, work satisfaction, and supervisor as voice manager were entered into the regression equation, after which the two-way interaction terms were entered. In the final third step, the three-way interaction term was added. The regression coefficients of the main effects involved the first step of this analysis, those of the two-way interactions involved the combination of the first and the second step, and those of the three-way interaction involved the final equation based on all three steps (Cohen & Cohen, 1983). To facilitate interpretation, these analyses were conducted with standardized variables (Aiken & West, 1991).

Employee Likelihood to Voice Conventional Ideas. Entering adaption-innovation, work satisfaction, and supervisor as voice manager into the regression of employee likelihood to voice conventional ideas yielded a significant equation ($F(3,87) = 3.25, p < .05, R^2 = .10$). As can be seen in Table VI, this effect was due to cognitive style preferences for adaption-innovation ($B = -.24, p < .05$), and supervisor as voice manager ($B = .23, p < .05$); work satisfaction did not predict unique variance ($B = -.05, n.s.$). In line with the theory, employees were more likely to

Table VI. Results of Hierarchical Regression Analysis^a

Dependent variables		Independent variables		<i>B</i>	<i>R</i> ² -Ch
Voice of conventional ideas	Step 1:	Adaption-innovation (AI)		-.24*	
		Supervisor as voice manager (SVM)		.23*	
		Work satisfaction (WS)		-.05	.11*
	Step 2:	AI x SVM		-.08	
		AI x WS		.18	
		SVM x WS		-.15	.04
Voice of novel ideas	Step 3:	AI x SVM x WS		.18*	.03*
	Step 1:	Adaption-innovation (AI)		.40***	
		Supervisor as voice manager (SVM)		.05	
		Work satisfaction (WS)		-.19*	.22***
	Step 2:	AI x SVM		.11	
		AI x WS		.09	
		SVM x WS		-.03	.02
	Step 3:	AI x SVM x WS		.26**	.06**
	Tests of simple slopes				
		Voice of conventional ideas		Voice of novel ideas	
Conditional Values:		<i>B</i>	<i>T</i>	<i>B</i>	<i>T</i>
At SVM _(High) , SW _(High)		.04	.25	.75	4.49***
At SVM _(High) , SW _(Low)		-.76	-3.16**	.03	.15
At SVM _(Low) , SW _(High)		-.14	-.55	.07	.32
At SVM _(Low) , SW _(Low)		-.20	-.80	.45	1.97

^a**p* < .05; ***p* < .01; ****p* < .001; one-tailed significance levels, except for the two-tailed significant simple slope of the unpredicted effect of adaption-innovation on employee likelihood to voice novel ideas under the conditional situation of high SVM and high SW.

voice conventional ideas when they were more adaptively oriented, and perceive their supervisors as more effective voice managers.

Entering the two-way interaction terms into the regression equation yielded no significant increase in the proportion of predicted variance ($F_{Ch(6,84)} = 1.56$, n.s.). Finally, a three-way interaction tended to qualify the main effects of adaption-innovation and supervisor as voice manager ($F_{Ch(7,83)} = 2.62$, $p < .06$, $R^2_{Ch} = .03$). To further analyze this three-way interaction, the total regression equation was rearranged in simple regressions of employee likelihood to voice conventional ideas on adaption-innovation given conditional values of work satisfaction ($M + SD$; $M - SD$) and the effectiveness of the supervisor as voice manager ($M + SD$; $M - SD$) (cf. Aiken & West, 1991). As shown in Table VI, testing the appropriate simple slopes revealed only a significant regression coefficient of adaption-innovation ($B = -.76$, $T = -3.16$, $p < .01$) in case of work dissatisfaction ($M - SD$) and a supervisor who is perceived as an effective voice manager ($M + SD$). No other significant simple slopes were found. These results confirmed our prediction that adaptors are more likely to upward voice conventional ideas when they are dissatisfied rather than satisfied

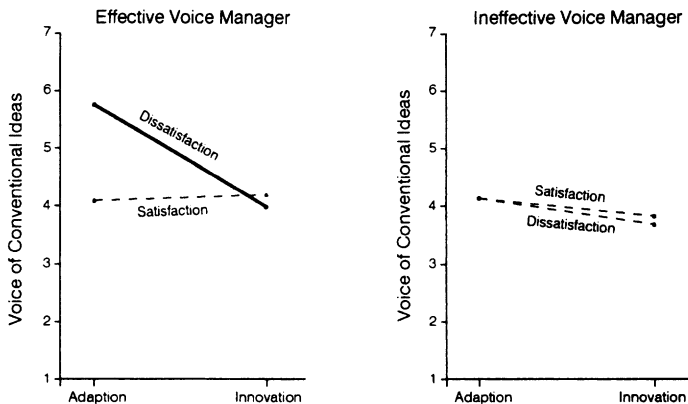


Fig. 1. Employee likelihood to voice conventional ideas as a function of adaption–innovation, supervisor as voice manager, and work satisfaction.

with work and perceive their supervisors as effective rather than ineffective voice managers. This effect is represented by the solid regression line in Fig. 1.

Employee Likelihood to Voice Novel Ideas. Predicting employee likelihood to voice novel ideas on the basis of adaption–innovation, work satisfaction, and supervisor as voice manager yielded a significant regression equation for the main effects ($F(3,87) = 8.37, p < .001, R^2 = .22$). As Table VI shows, these effects were due to cognitive style preferences for adaption–innovation ($B = .40, p < .001$) and work satisfaction ($B = -.19, p < .05$). That is, employees were more likely to voice novel ideas when they were more innovatively oriented and more dissatisfied with their work.

Entering the two-way interaction terms into the regression equation yielded no significant increase in the predicted variance ($F_{Ch}(6,84) = .84, n.s.$). However, the three-way interaction was found to be significant, ($F_{Ch}(7,83) = 6.79, p < .01, R^2_{Ch} = .06$). To further analyze this three-way interaction, the simple slopes of the regression of employee likelihood to voice novel ideas on basis of adaption–innovation was tested, given conditional values of work satisfaction ($M + SD; M - SD$) and the supervisor as voice manager ($M + SD; M - SD$). These simple slope tests revealed that only in case of work satisfaction and an effective supervisor as voice manager, innovators were more likely to voice novel ideas than adaptors ($B = .75, T = 4.49, p < .001$). No other simple slopes were found to be significant. So, against our hypothesis, work dissatisfaction together with an effective supervisor as voice manager blurred the effect of cognitive style preferences for adaption–innovation on employee likelihood to voice novel ideas. Under these particular circumstances, innovators as well as adaptors reported rela-

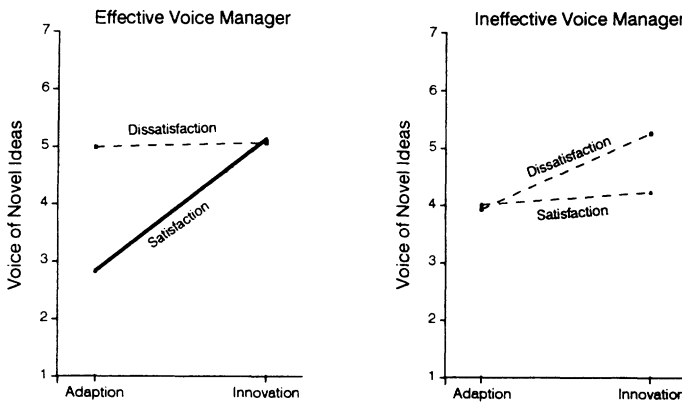


Fig. 2. Employee likelihood to voice novel ideas as a function of adaption–innovation, supervisor as voice manager, and work satisfaction.

tively high levels of likelihood to voice novel ideas to their supervisors (see Fig. 2). Work satisfaction rather than dissatisfaction in interaction with an effective supervisor as voice manager appeared to shape the relationship between the adaption–innovation personality trait and employee likelihood of voicing novel ideas. In this particular condition, innovators compared to adaptors reported much greater likelihood of voicing novel ideas. This effect is represented by the solid regression line displayed in Fig. 2.

CONCLUSIONS

Study 2 aimed (a) to replicate the findings of Study 1, and (b) to examine how work satisfaction and the supervisor as voice manager shape the relationship between cognitive style preferences for adaption–innovation and employee likelihood to upward voice ideas. Similar to Study 1, results demonstrated that innovators compared to adaptors are less likely to voice conventional ideas and more likely to voice novel ideas for organizational change toward their supervisors.

Moreover, Study 2 provided evidence for our supposition that the context-related factors of work satisfaction and the supervisor as voice manager moderate the relationship between cognitive style preferences for adaption–innovation and employee likelihood to voice. As expected, results demonstrated that adaptors relative to innovators are more likely to voice conventional ideas when they are dissatisfied rather than satisfied with aspects of work and perceive their supervisors as effective rather than ineffective voice managers. Regarding employee likelihood to voice novel ideas, the person–environment interaction appeared to be more complicated.

That is, not only innovators but also adaptors reported relatively high levels of likelihood to voice novel ideas when they are dissatisfied with work and perceive their supervisors as effective voice managers. Thus, against our prediction, work dissatisfaction together with an effective supervisor as voice manager impeded rather than facilitated the effect of adaption-innovation on employee likelihood to voice novel ideas. Work satisfaction instead of work dissatisfaction appeared to moderate the effects of the personality trait of adaption-innovation. That is, in case of an effective supervisor as voice manager, satisfied adaptors were hardly tended to voice novel ideas, whereas satisfied innovators reported to be quite likely to address that kind of ideas to their supervisors.

GENERAL DISCUSSION

The theoretical implications of the findings of this study can be summarized in three conclusions. First, our proposal to conceptually differentiate between voice of conventional and novel ideas appears to be meaningful. That is, the current data indicate that employee likelihood of voicing these qualitatively different types of ideas relates to cognitive style preferences for adaption-innovation. This outcome confirms Whitey and Cooper's (1989) suggestion that employee upward voice is a broad and complex construct consisting of several subcomponents such as submitting ideas for improving things (conventional ideas), and proposing new ways of doing things (novel ideas). So, our findings suggest that prior difficulties in predicting voice behavior (Whitey & Cooper, 1989) can be overcome by a more precise definition and operationalization of the voice construct as utilized in this study.

Second, the present study applies theory and research on cognitive style preferences for adaption-innovation to the domain of employee voice. Studies 1 and 2 provide support for our assumption that individual differences in cognitive style preferences for adaption-innovation affect the type of ideas employees tend to voice to their supervisors. Thus, the cognitive style dimension of adaption-innovation may be added to Hirschman's (1970) model of exit, voice, and loyalty as a personality correlate of employees who tend to voice to their supervisors.

The third conclusion is that the complex role of work satisfaction in predicting employee likelihood to voice ideas found in this study refers to two separate paradigms on work satisfaction. The first paradigm focuses on reactions to work *dissatisfaction* (Farrell, 1983; Fischer & Locke, 1992; Hirschman, 1970; Rusbult, Farrell, Rogers, & Mainous, 1988; Whitey & Cooper, 1989). The implicit assumption underlying this paradigm holds that work-related problems motivate employees to adopt behavioral coping

strategies such as discussing the problems with the supervisor (voice), leaving the organization (exit), patiently waiting for better conditions (patience), or chronic lateness and absenteeism (neglect). The current results confirm this notion for the prediction of employee likelihood to voice *conventional* ideas. That is, in case of effective supervisors as voice managers, dissatisfied rather than satisfied adaptors are more likely to voice conventional ideas.

However, the pattern of findings with respect to the prediction of employee likelihood to voice *novel* ideas is much more complicated. In line with the dissatisfaction paradigm, adaptors who evaluate their supervisors as effective voice managers are more likely to voice novel ideas when they are dissatisfied rather than satisfied with work. But, unlike adaptors, satisfied as well as dissatisfied innovators report relatively high levels of likelihood to voice novel ideas to supervisors who are effective voice managers. Thus, against the dissatisfaction paradigm, work satisfaction appears to motivate stronger innovatively oriented employees to voice novel ideas. This particular outcome fits with the paradigm focusing on a positive relationship between *work satisfaction* and extrarole behavior (George & Brief, 1992; Organ & Ryer, 1995; Van Dyne, Graham, & Dienesch, 1994).

Extrarole behavior reflects constructive or cooperative gestures that benefit the organization and go beyond mandatory in-role expectations. As such, voicing of novel ideas for solving work-related problems can be captured as extrarole behavior (cf. Van Dyne, Graham, & Dienesch, 1994). The satisfaction–extrarole behavior relationship found in several studies is assumed to be due to the effects of positive mood and positive job-related cognitions (for overviews, see George & Brief, 1992; Organ & Ryan, 1995). In terms of the satisfaction paradigm, the current results suggest that work satisfaction motivates innovators rather than adaptors to exert the particular extrarole behavior of voicing novel ideas. In other words, even when the work environment is experienced as satisfactory, innovators tend to challenge the regular patterns and commonly accepted assumptions by voicing extraordinary suggestions for organizational change. It may be due to this somewhat compulsively creating of uncommon ideas without immediate inducements, that innovators are sometimes seen as the cause of discord and friction and viewed with distaste by more adaptively-oriented colleagues and managers (Kirton, 1976).

This study has several implications on an applied level. Drucker (1969) already emphasized that organizations need employee input of ideas for “doing things better.” Particularly when the environment is relatively stable, further refining and routinizing of an effective framework can boost organizational performance (Mintzberg, 1979). This study suggests that adaptively-oriented employees who are dissatisfied about aspects of work are

more likely to address their ideas for doing things better when their supervisors are approachable and responsive to voice behavior. In this vein, Saunders et al. (1992) already noted that supervisors need to be trained to manage employee upward voice in an effective way, that is, with fairness, correct decisions, promptness, and willingness to take action.

However, from time to time organizations are confronted with situations in which the consensually agreed assumptions and strategies are no longer appropriate to resolve new problems. In such obvious crises, management is in dire need of novel theories and practices in order to survive. The current results suggest that the upward flow of novel ideas in organizations is related to the employee's cognitive style preferences for adaption-innovation. Hence, personnel management might take care of the selection and inclusion of a sufficient amount of innovators into the organization. More specifically, in turnaround situations, managers with cognitive style preferences for innovation may be selected for key positions in processes involving crucial changes (cf. Kirton, 1984). But, caution is due here as a cognitive style preference for innovation in itself is not enough to be a successful change agent. Change managers additionally need sociopolitical and technical skills for gaining ongoing respect of colleagues and superiors, finding sponsorship for extra-paradigmatical ideas, building coalitions of supporters, and implementing adopted innovations (e.g., Amabile, 1988; Kanter, 1988; Zaltman, 1977). Since the present study was restricted to employee likelihood to voice ideas, future research should investigate how cognitive style preferences for adaption-innovation affect behaviors related to phases in innovation processes as coalition building and implementation.

Before closing, we wish to mention some limitations of the current study and directions for future research. First, following Saunders et al. (1992), the criterion variable in this study is employee likelihood to upward voice ideas. We did not consider how intentions to voice translate into actual voice behaviors. In the paradigm on planned behavior, the general rule is found that "when behaviors pose no serious problems of control, they can be predicted from intentions with considerable accuracy" (Ajzen, 1991, p. 186; see also Ajzen, 1988; Sheppard, Hartwick, & Warshaw, 1988). From that perspective, perceptions of the way a supervisor usually deals with voice behavior serve as an important control factor for an employee who intends to voice toward that supervisor (cf. Saunders et al., 1992). In Study 2, just those perceptions were taken into account. Of course, other factors such as voice procedures applied in an organization and employee's social skills may determine his or her control of voice behaviors. So, even though intentions frequently appear to be good predictors of behavior (for reviews, see Ajzen 1988; Ajzen & Fishbein, 1980; Canary & Seibold, 1984;

Sheppard, Hartwick, & Warshaw, 1988), the particular relationship between intended and actual voice behavior deserves future research.

A second limitation concerns the generalizability of the findings to other types of organizations than the police organization in which the present study was conducted. As a public machine bureaucracy, a police organization is characterized by centralization, standardization of work processes, and formalization of behavior (Mintzberg, 1979). In a bureaucratic structure, values such as precision, reliability, and efficiency are predominant. Kirton (1984) provided some evidence that adaptors rather than innovators are attracted to organizations characterized by especially this kind of values. This might clarify the somewhat low mean and standard deviation of the KAI-scores found in the present study. For reasons of generalizability, the relationship between the adaptor-innovator personality trait and employee likelihood to upward voice needs therefore to be replicated in other types of organizations with different distributions of KAI-scores.

In conclusion, first and foremost, the most tangible outcome of this study is that employees are likely to voice qualitatively different ideas toward their supervisors as a consequence of their cognitive style preferences for adaption-innovation.

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